

WHAT IS CLAIMED IS:

1. An optical pickup actuator, comprising:

a support plate provided with a pair of yokes extended  
5 upward and a pair of magnets oppositely attached to opposite  
surfaces of the pair of yokes;

a bobbin placed on a top surface of the support plate,  
and provided with an object lens located on a portion thereof  
and a tracking coil and a focusing coil wound on an outer side  
10 of the bobbin, the coils being installed to be located between  
the magnets;

a wire holder fixed to a portion of the top surface of  
the support plate and provided with a depression formed in a  
center portion of a rear surface thereof to be depressed  
15 compared to both ends of the rear surface, the depression  
having a screw receiving hole formed in a center portion  
thereof;

a printed circuit board closely attached to the rear  
surface of the wire holder and provided with a screw hole  
20 formed through a center portion thereof;

a plurality of wires provided with first ends fixed to  
upper and lower portions of both sides of the bobbin and  
second ends extended from the first ends, the second ends  
penetrating through the wire holder and the printed circuit  
25 board and being fixed to a rear surface of the printed circuit

board so as to elastically support the bobbin;

a control screw engaged with the screw receiving hole of the wire holder after penetrating through the screw hole of the printed circuit board, the control screw allowing the  
5 printed circuit board to be arcuately bent while pressurizing a center portion of the printed circuit board to be located in the depression formed in the wire holder, thus deforming the printed circuit board to allow both ends thereof to be away from the wire holder; and

10 gel functioning as a damper filled into spaces between the both ends of the arcuately bent printed circuit board and the wire holder.

2. The optical pickup actuator according to claim 1,  
15 wherein:

the wire holder is provided with assembly bosses formed on opposite sides around the screw receiving hole in the rear surface of the wire holder to be protruded from the wire holder; and

20 the printed circuit board is provided with assembly holes formed therethrough at locations corresponding to those of the assembly bosses, the assembly holes being formed lengthwise in a transverse direction.

25 3. The optical pickup actuator according to claim 1,

wherein the control screw is designed so that a header part thereof pressurizes the printed circuit board and is then fixed to the printed circuit board through bonding or soldering so as to prevent the control screw from being  
5 disengaged after engagement of the control screw has been completed.

4. The optical pickup actuator according to claim 1, wherein the printed circuit board is integrally provided with  
10 tension parts in upper and lower portions of the both ends of the printed circuit board to be made elastic by cutting away parts of the both ends thereof, and the wires are fixedly attached to the corresponding tension parts.

15 5. An optical pickup actuator, in which a bobbin provided with an object lens is elastically supported by a plurality of wires penetrating through a wire holder and being fixed to a printed circuit board, comprising:

a wire holder provided with a depression formed in a  
20 center portion of a rear surface thereof to be depressed compared to both ends of the rear surface;

a printed circuit board closely attached to the rear surface of the wire holder, and provided with both ends to which corresponding wires are connected; and

25 pressurizing means for allowing the printed circuit board

to be arcuately bent while pressurizing a center portion of the printed circuit board to be located in the depression of the wire holder, the pressurizing means being fixed to the printed circuit board so as to maintain a bent state of the  
5 printed circuit board.

6. The optical pickup actuator according to claim 5, wherein the pressurizing means is a control screw for pressurizing the printed circuit board through a header part  
10 thereof while penetrating through the printed circuit board and being engaged with the wire holder.

7. The optical pickup actuator according to claim 5, wherein the pressurizing means comprises a control screw  
15 sequentially penetrating through the printed circuit board and the wire holder, and a nut engaged with the control screw on a front surface of the wire holder.

8. The optical pickup actuator according to claim 5,  
20 wherein the pressurizing means comprises a control screw sequentially penetrating through the wire holder and the printed circuit board from a front surface of the wire holder, and a nut engaged with the control screw on a rear surface of the printed circuit board.

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9. The optical pickup actuator according to claim 5,  
wherein the pressurizing means is an adhesive for fixing parts  
of both the printed circuit board and the wire holder to each  
other to maintain a deformed printed circuit board after the  
5 printed circuit board is pressurized using a separate jig to  
be arcuately deformed.

10. The optical pickup actuator according to claim 5,  
further comprising gel functioning as a damper filled into  
10 spaces between the both ends of the arcuately bent printed  
circuit board and the wire holder.

11. The optical pickup actuator according to claim 5,  
wherein the printed circuit board is integrally provided with  
15 tension parts in upper and lower portions of the both ends of  
the printed circuit board to be made elastic by cutting away  
parts of the both ends thereof, and the wires are fixedly  
attached to the corresponding tension parts.